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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,363	08/27/2001	Tadaaki Harada	Q65847	3899

7590 07/27/2005  
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EXAMINER

ANDUJAR, LEONARDO

ART UNIT PAPER NUMBER

2826

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/914,363	<b>Applicant(s)</b> HARADA ET AL.	
	<b>Examiner</b> Leonardo Andújar	<b>Art Unit</b> 2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 May 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 7-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverses of group I (claims 1-6 and 22) in the reply filed on 12/22/2004 is acknowledged.

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiobara (US 5,731,370).
5. Regarding claim 1, Shiobara teaches epoxy resin composition including an epoxy resin; a phenolic resin; a latent curing accelerator and an inorganic filler (abstract). Although Hosokawa does not explicitly disclose that the viscosity of the resin at 25 °C is 7000 poise or more and 5000 poise or less at 80 °C, this limitation is an inherent property of the resin disclosed by Shiobara.
6. In regards to claims 2-4, the claim limitations describing the physical state of the resin raw materials/constituents (i.e. solid or liquid) are considered product by process limitations because they intent to describe the physical state of the resin's constituents

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during the manufacturing process and not the final product. Note that the final product (the resin) is solid. A "product by process" claim is directed to the product per se, no matter how actually made. Furthermore, the physical property of the resin's constituents at any intermediate process step does not affect the physical/chemical properties of the final product. See In re Thorpe et al., 227 USPQ 964 (CAFC, 1985) and the related case law cited therein which makes it clear that it is the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. As stated in Thorpe, even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. In re Brown, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972); In re Pilkington, 411 F.2d 1345, 1348, 162 USPQ 145, 147 (CCPA 1969); Buono v. Yankee Maid Dress Corp., 77 F.2d 274, 279, 26 USPQ 57, 61 (2d. Cir. 1935). Note that Applicant has burden of proof in such cases as the above case law makes clear.

7. Regarding claim 6, Shiobara teaches that the inorganic filler may be spherical fused silica powder, which is incorporated in the resin composition for a semiconductor encapsulation in a proportion of 15-85% by weight based on the total amount of the resin composition of encapsulation (col. 5/lls. 51-67 & col. 6/lls. 1-7).

8. Claims 5 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiobara (US 5,731,370) in view of Hosokawa (JP-10168161).

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9. Regarding claim 5 and 22, Shiobara teaches most aspects of the instant invention except for a curing accelerator having a core shell structure comprising a core portion made of the curing accelerator encapsulated with a shell portion mainly composed of a polymer having a structural unit represented by the following general

formula:  $\begin{array}{c} R_1 \quad O \quad R_2 \\ | \quad || \quad | \\ -N-C-N-R \end{array}$  wherein R represent a divalent or trivalent organic group; and R1 and R2, which may be the same or different, each represent a hydrogen atom or a monovalent organic group or composed by a polymer obtained by the reaction of a polyisocyanate with a polyvalent amine. Nevertheless, Hosokawa shows a curing accelerator having a core shell structure comprising a core portion made of the curing accelerator encapsulated with a shell portion mainly composed of a polymer having a

structural unit represented by the following general formula:  $\begin{array}{c} R_1 \quad O \quad R_2 \\ | \quad || \quad | \\ -N-C-N-R \end{array}$  wherein R represent a divalent or trivalent organic group; and R1 and R2, which may be the same or different, each represent a hydrogen atom or a monovalent organic group which is a polymer that can obtained by the reaction of a polyisocyanate with a polyvalent amine (scientific fact). The use of this accelerator provide a thermosetting resin composition having excellent in store stability and that can be used to produce a semiconductor device having high reliability (see abstract & pp026-0029). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the accelerometer disclosed by Shiobara having a core shell structure comprising a core portion made of the curing accelerator encapsulated with a shell portion mainly composed of a polymer having a structural unit represented by the following general

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formula:  $\begin{array}{c} R_1 \quad O \quad R_2 \\ | \quad || \quad | \\ N - C - N - R \end{array}$  wherein R represent a divalent or trivalent organic group; and R1 and R2 in order to obtain a resin composition having excellent in store stability and that can be used to produce a semiconductor device having high reliability as taught by Hosokawa.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 1-6 and 22 have been considered but are moot in view of the new ground(s) of rejection

### ***Conclusion***

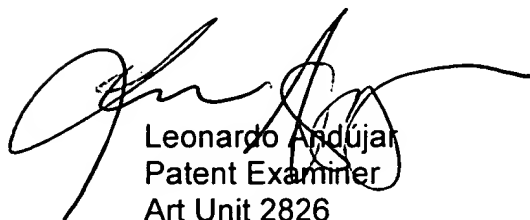
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonardo Andújar whose telephone number is 571-272-1912. The examiner can normally be reached on Mon through Thu from 9:00 AM to 7:30 PM EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Leonardo Andújar', is written over the printed name and title.

Leonardo Andújar

Patent Examiner

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07/20/2005